

Claim Chart

U.S. Patent No. 6,708,221 versus:

- **Exhibit 6** - “**RFC 1733**” - Mark Crispin, Distributed Electronic Mail Models in IMAP4, Request For Comments 1733 (Dec. 1994).
- **Exhibit 7** - “**IMAP4 Disconnected Sync**” - Rob Austein, Synchronization Operations for Disconnected IMAP4 Clients, ietf-imap-disc-01 (Nov. 1994)]
- **Exhibit 8** - “**RFC 1730**” - Mark Crispin, Internet Message Access Protocol – Version 4, Request For Comments 1730 (Dec. 1994).

| ’221 Claim Language | Ex. 6, RFC 1733 | Ex. 7, IMAP4 Disconnected Sync | Ex. 8, RFC 1730 |
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| 8. A system for synchronizing workspace data, comprising: | RFC 1733 discloses IMAP4 as a system for synchronizing workspace data. Pg. 1 (“There are three fundamental models of client/server email: offline, online, and disconnected use. IMAP4 can be used in any one of these three models.” “In [the disconnected use model] a client user downloads some set of messages from the server, manipulates them offline, then at some later time uploads the changes. The server remains the authoritative repository of the messages. the problems of synchronization (particularly when multiple clients are involved) are handled through the means of unique identifiers | IMAP4 Disconnected Sync discloses IMAP4 as a system for synchronizing workspace data. Pg. 1 (“Synchronization Operations for Disconnected IMAP4 Clients” “This note attempts to address some of the issues involved in building a disconnected IMAP4 client. In particular, it deals with the issues of what might be called the ‘driver’ portion of the synchronization tool: the portion of the code responsible for issuing the correct set of IMAP4 commands to synchronize the disconnected client in the way that is most likely to | RFC 1730 discloses IMAP4 as a system for synchronizing workspace data. Pg. i (“The Internet Message Access Protocol, Version 4 (IMAP4) allows a client to access and manipulate electronic mail messages on a server. IMAP4 permits manipulation of remote message folders, called ‘mailboxes’, in a way that is functionally equivalent to local mailboxes. IMAP4 also provides the capability for an offline client to resynchronize with the server (see also [IMAP-DISC]).”) |

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| | for each message.”) | make the human who uses the disconnected client happy.”) | |
| means for storing first workspace data on a first device; | RFC 1733 discloses means for storing first workspace data on a first device. Pg. 1 (“a client user downloads some set of messages from the server, manipulates them offline, then at some later time uploads the changes.”) | IMAP4 Disconnected Sync discloses means for storing first workspace data on a first device. Pg. 2 (“All mailbox state or content information stored on the disconnected client should be viewed strictly as a cache of the state of the server.” “the IMAP4 server is not responsible for remembering the state of the disconnected IMAP4 client.”) | RFC 1730 discloses means for storing first workspace data on a first device. Pg. 3 (“so that the client can reference its recorded copy”) |
| | | Pg. 3-4 (“Actions’ are queued requests that were made by the human to the client’s MUA software while the client was disconnected. Expected requests are commands like COPY, STORE, EXPUNGE, CREATE. ... By processing all the actions before proceeding with synchronization, we avoid having to compensate for the local MUA’s changes to the server’s state. That is, once | |

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| means for storing second workspace data on a second device; | Pg. 1 ("The disconnected use model ... In this model a client user downloads some set of messages from the server, manipulates them offline, then at some later time uploads the changes. The server remains the authoritative repository of the messages. the problems of synchronization (particularly when multiple clients are involved) are handled through the means of unique identifiers for each message.") | Pg. 2 ("All mailbox state or content information stored on the disconnected client should be viewed strictly as a cache of the state of the server." Pg. 2 ("The "master" state remains on the server, just as it would with an interactive IMAP4 client.") | Pg. 8 ("At any time, a server can send data that the client did not request. Sometimes, such behavior is required. For example, agents other than the server may add messages to the mailbox (e.g. new mail delivery), change the flags of message in the mailbox (e.g. simultaneous access to the same mailbox by multiple agents), or even remove messages from the mailbox. A server MUST send mailbox size updates automatically if a mailbox size change is observed during the processing of a command. A server SHOULD send message flag updates automatically, without requiring the client to request such updates explicitly. Special rules exist for server notification of a client about the removal of messages to prevent synchronization errors; see the description of the EXPUNGE |

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| <p>means for determining differences between the first workspace data and the second workspace data;</p> | <p>"In [the disconnected use model] a client user downloads some set of messages from the server, manipulates them offline, then at some later time uploads the changes.</p> | <p>Pg. 4 ("a message's descriptor is that set of information that allows the synchronization program to decide what protocol actions are necessary to bring the local cache to the desired state for this message" "this step is also where the client finds out about changes to the flags of messages that the client already has in its local cache, as well as finding out about messages in the local cache that no longer exist on the server"). Pg. 5 ("[the human] simply wants to bring the client's cache up to date so that it accurately reflects the mailbox's current state on the server." "information we need to determine what changes may have occurred to messages that the client already has cached.") Pg. 6 ("the client simply needs to process the incoming fetch items, using them to update the local message cache."</p> | <p>response for more details.")</p> <p>Pg. 36 ("A unique identifier of a message is a number, and is guaranteed not to refer to any other message in the mailbox. Unique identifiers are assigned in a strictly ascending fashion for each message added to the mailbox. Unlike message sequence numbers, unique identifiers persist across sessions. This permits a client to resynchronize its state from a previous session with the server (e.g. disconnected or offline access clients); this is discussed further in [IMAP-DISC].")</p> <p><i>Note: IMAP-DISC is Exhibit B, [IMAP4 Disconnected Sync].</i></p> |

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| means for storing the differences at a global server; | In [the disconnected use model] a client user downloads some set of messages from the server, manipulates them offline, then at some later time uploads the changes. | Pg. 4 ("a message's descriptor is that set of information that allows the synchronization program to decide what protocol actions are necessary to bring the local cache to the desired state for this message" "this step is also where the client finds out about changes to the flags of messages that the client already has in its local cache, as well as finding out about messages in the local cache that no longer exist on the server"). | Pg. 33-34 ("STORE Command ... The STORE command alters data associated with a message in the mailbox. ... The currently defined data items that can be stored are: FLAGS <flag list> Replace the flags for the message with the argument ... Example: C: A003 STORE 2:4 +FLAGS (Deleted)") Pg. 50 ("FLAGS A parenthesized list of flags that are set for this message. This may include keywords as well as the following system flags: \\Seen Message has been read \\Answered Message has been answered \\Flagged Message is "flagged" for urgent/special attention \\Deleted Message is "deleted" for removal by later EXPUNGE \\Draft Message has not completed composition (marked as a draft).") |
| and means for sending the differences from the global server to the second | The server remains the authoritative repository of the messages. the problems of synchronization (particularly when multiple clients are | Pg. 4 ("a message's descriptor is that set of information that allows the synchronization program to decide what protocol actions | Pg. 8 ("At any time, a server can send data that the client did not request. Sometimes, such behavior is required. For example, agents other than the serve may add messages to |

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| device. | involved) are handled through the means of unique identifiers for each message.” | <p>are necessary to bring the local cache to the desired state for this message” “this step is also where the client finds out about changes to the flags of messages that the client already has in its local cache, as well as finding out about messages in the local cache that no longer exist on the server”).</p> <p>Pg. 5 (“The second command fetches the information we need to determine what changes may have occurred to messages that the client already has cached.”)</p> <p>Pg. 3-4 (“‘Actions’ are queued requests that were made by the human to the client’s MUA software while the client was disconnected. ... By processing all the actions before proceeding with synchronization, we avoid having to compensate for the local MUA’s changes to the server’s state. That is, once we have processed all</p> | <p>the mailbox (e.g. new mail delivery), change the flags of message in the mailbox (e.g. simultaneous access to the same mailbox by multiple agents), or even remove messages from the mailbox. A server MUST send mailbox size updates automatically if a mailbox size change is observed during the processing of a command. A server SHOULD send message flag updates automatically, without requiring the client to request such updates explicitly. Special rules exist for server notification of a client about the removal of messages to prevent synchronization errors; see the description of the EXPUNGE response for more details.”)</p> <p>Pg. 15 (“Before returning an OK to the client, the server MUST send the following untagged data to the client: FLAGS Defined flags in the mailbox, <n> EXISTS The number of messages in the mailbox, <n> RECENT The number of messages added to the mailbox since the previous time this mailbox was read., OK [UIDVALIDITY <n>] The unique identifier validity value.”)</p> |

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| | | <p>the pending actions, the steps that the client must take to synchronize itself will be the same no matter where the changes to the server's state originated.”)</p> | <p>Pg. 45 (“RECENT Response ... The RECENT response reports the number of messages that have arrived since the previous time a SELECT command was done on this mailbox. This response occurs as a result of a SELECT or EXAMINE command, and if the size of the mailbox changes (e.g. new mail). The update from the RECENT response MUST be recorded by the client.”)</p> <p>Pg. 45 (The EXPUNGE response reports that the specified message sequence number has been permanently removed from the mailbox.”)</p> |